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[redacted] OO/C 21 March 1955

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THRU : Chief, D/S
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Evaluation of Paper on Commercial and Technical Speeds by [redacted]

REFERENCE: ORR-8372, OO/C Case 16,537

25X1A5a1 The paper on Commercial and Technical Speeds of USSR and USA Freight Trains by [redacted] is, in general, a good exposition of the subject which meets S/TR requirements in part. It is recommended that if possible the comments below be transmitted to Mr. [redacted], that he revise the paper 25X1A5a1 where he feels it necessary, and that the paper then be published for the benefit of the intelligence community. Thereafter, it is recommended that he produce a paper on another of the topics recommended by ORR.

25X1A5a1 In view of Mr. [redacted] background and administrative experience, and of the value of this paper, it is recommended that he be paid at the rate of $125 a week for his work on this paper. Although it is difficult to assess the amount of time required to produce a paper of this type, it is possible that it took him about two weeks.

The following comments are submitted on the details of this paper:

In formula 1, the fourth term should probably read, "Is the total time of the train at intermediate station stops."

On page 12, paragraph 3 and 4, the term "exploited section" should be defined. Is this from one station to the next; from a station where the train stops to the next station where it stops; or is it from the point where the locomotive is attached to the train, to the point where that locomotive is removed from the train (division point to division point)? What is the name given to stations at the two ends of the exploited section--is it technical stations? Whatever the term is, it should be defined. Also, the same term should be inserted in formula 1 in terms 3 and 4, which at present do not state which type of station is being referred to.

The argument advanced on p. 13, paragraph 3, second sentence, is not particularly valid if, when the station area is excluded in the numerator, there is also excluded in the denominator the time spent by the train in motion in the station area.

At some point in the paper, mention should be made of how time of train in motion, and time of train at intermediate stations, is recorded

for determining commercial and technical speed. Commercial speed can be determined simply by taking the total elapsed time from the time the train leaves its point of origin to the time it stops at point of destination; but to determine technical speed, time of the train at intermediate stations must be determined and then excluded from this overall time.

The section from page 14 to page 17 appears to be unnecessarily complicated to prove the point that the more local (collecting) trains there are, the lower the average train speeds will be. However, no mention was made of the fact that this might be counterbalanced by a corresponding increase in the number of marshruts, which make long runs without reclassification.

In formula 4, page 14, some of the terms used in the formula have not been defined. In formula 5 the term T has not been defined. In formula 6, the term C^t has not been defined.

In formula 7, there appears to be an error in making 1 equal to C^t, since if this were true, and if C^t were given a value of 5 in formula 8, then 1 would have to equal 50 if the two factors in the denominator were equal in value to C^t.

We have not had the opportunity to check the figures given in the table on page 18. It should be mentioned however, that Kaganovich stated that 1953 commercial speed was 11.5 km/hr. less than technical speed. The difference between these speeds as shown in the table is 11.0 km/hr..

The table raises a number of questions. The column on "average car run in km. per 24 hours" needs careful defining. This figure is probably derived by dividing car-axle-kilometers or car-kilometers per day by the average number of car-axles or cars in the working park per day. Assuming that the Soviets compile figures on car-axle-kilometers or car-kilometers in exactly the same way it is compiled in the US, it is necessary to determine whether the Soviets calculate their working park in exactly the same way as it is done in the US. Inasmuch as the Soviets exclude from working park all cars which are in reserves (including pool cars waiting for grain harvest), there is a significant difference in working park as calculated in the USSR and in the US. Hence, when dividing car-axle-kilometers by working park in the USSR, using a much smaller figure for working park than would be used in US practice, it is obvious that the Soviets would come up with an average car run in km. per 24 hours which is not directly comparable with the US figure. In addition to this difference in method of computation, there are also some differences in actual practice, one of the most important of which is the difference in loading time permitted. In the US, 48 hours are permitted for each loading or unloading (Saturday, Sundays, and holidays are given free in addition to the 48 hours); in the USSR, less than 10 hours are permitted for each loading or unloading. This fact, plus the difference in method of computation, would account for a large part of this difference in the average car run between the USSR and US. It should be pointed out that while the

figure on average car run per 24 hours is neither commercial nor technical speed, it is nevertheless a very important freight car speed figure, and perhaps it would be advisable to expand the title of the paper to include a mention of Average Overall Speed of Freight Car Movement. If this were done, it would be advisable to point out the percentage of freight car time in motion, and percentage of time spent standing.

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The notes on page 19 to the table on 18 indicate that Mr. [redacted] does not have at his command any sources not available to anyone else doing research on the Soviet Union. It is interesting to note that he employs figures from [redacted] although he indicated in an earlier statement that he did not have too high a regard for [redacted] figures.

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Bottom of p. 19, source mentions how unreliable the computation of commercial speeds is. Information on how these figures are computed, and on how unreliable they are (is the margin of error 5 percent or 50 percent?) would be significant and of value. It is likely that this will involve our question above on how time of train in motion and time at intermediate stops is computed.

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Mr. [redacted] conclusion on page 20, at the end of the second full paragraph, that any considerable increase in commercial speed indicates economic troubles or deterioration, would be an extremely significant point if he could prove it. However, it is also possible that such an increase could take place if a country had a very low train speed to begin with (as the USSR did have), and if it removed bottlenecks to increase speed, such as improving organization, increasing incentives to move trains faster, and an increase in the proportion of total trains which move as marshruts. His conclusions on deterioration and disorganization should also be tested in the light of increases in tons originated, carloadings, and ton-kilometers achieved in the USSR which seem to indicate improvement rather than deterioration.

On page 21, source says that excessive speeds of cars show that they run empty. This might be true if the USSR and US speeds were calculated on the same basis. However, Mr. [redacted] should check the percentage of empty and loaded freight car kilometers in the USSR and the US. He will probably find that the USSR has a smaller percentage of empty freight car kilometers than the US. But again, he must remember that the USSR does not include reserve cars in its working park; is it possible that the USSR might not count empty car kilometers performed by cars which are considered to be in the reserve park?

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Page 21, paragraph 5. The difference in hours per day in trains between USSR and US is not at all remarkable when considered in the light of differences in calculating working park, and the great differences in loading and unloading time.

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Page 21, last paragraph. Mr. [redacted] implies that the figures in the table are not actually true. However, he has given no indication throughout his paper that he has any evidence that they are not. It is recommended that he review the Soviet figures along the lines suggested above, and then come up with a specific statement on 1) Whether Soviet figures on train speed are accurately reported at the station; 2) Whether Soviet figures are accurately compiled at the station, system, and ministry level; 3) Whether Soviet figures are accurately reported, compiled, and reported, they are exactly comparable with US figures on train speed.

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